Selected use cases and requirements for UAS/Drones operations of civil protection and disaster relief users

CEPT Workshop on Spectrum for Drones, 29.-30.05.2018, Copenhagen
Drones for disaster management – a valuable tool
Current legal framework in Germany

• Since April 2017 new regulation on UAV operations with specific exceptions for public authorities and relief organisations

• No permission necessary:
  • Flight with devices up to 25 kg
  • Beyond visual line of sight
  • Over crowd
  • Over sensitive areas (e.g. critical infrastructures, government buildings, etc.)
  • Higher than 100m
  • ...
General capabilities
Use-cases „damage inspection“
Massive explosion of amunition storage in Cyprus, 2011
Use-cases „Search for injured persons“

Collaps of a large scaffold during construction works, 15.06.2016

Photo: Bergwacht Bayern
Use-cases „Search missed person“
Aerial support for Bavarian Mountain Rescue Organisation

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Use-cases „Search missed person“
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Photo: Bergwacht Bayern
Use-cases „Aerial imagery to coordinate firefighting“
Use-case „Large scale monitoring for situational awareness“

Extreme flood, June 2013
Use-case „Support lifeguards – drop safety buoy“
Since 2018 regularly in use in Mecklenburg-Vorpommern (Baltic See coast)
Use-case „Search and Rescue over sea“
Research project LARUS by German Maritime Search and Rescue Association and others
We go in when others have to go out!
Working group to develop a Service Regulation for civil protection authorities and organisations

- Since Sept. 2017
- Target: common agreed concept of operations
- First draft by end of this year
Drones for disaster management - requirements

- Reliable and robust frequencies for controlling the devices
- Real-time imagery/video transmission
- Operations everywhere and at all times
- Operations out of sight
- Special rules in a (future) traffic management system
Future perspectives

• More autonomy:
  – Detect and avoid
  – Swarms
  – Autonomous replacement of devices during operations
  – Multifunctional devices (instant change of capabilities)

• Larger devices for transport of
  – water for firefighting
  – persons

• Combination with AR/VR

• Automatic data analysis
Thank you for your kind attention!

Contact

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